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(71) Applicant (for all designated States except US): TELEFONAKTIEBOLAGET LM ERICSSON (publ)
[SE/SE]; Stockholm, S-126 25 Stockholm (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): NYSTRÖM, Johan [SE/SE]; Kronobergsgatan 22, S-112 33 Stockholm (SE). FRENGER, Pál [SI/SI]; Lykselevägen 33, S-162 67 Vällingby (SE). DAHLMAN, Erik [SI/SI]; Tackjärnvägen 12, S-168 68 Bromma (SI).

(74) Agents: STENBORG, Anders et al.; Aros Patent AB, P.O. Box 1544, S-751 45 Uppsala (SE).

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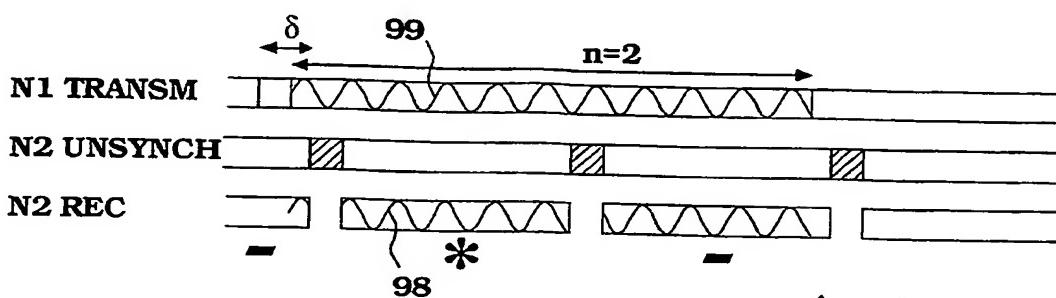
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(54) Title: WIRELESS MULTICARRIER SYSTEM WITH SUBCARRIERS RESERVED FOR COMMUNICATION BETWEEN UNSYNCHRONIZED NODES



(57) Abstract: In a system applying orthogonal frequency division multiplexing, OFDM, a number of carriers are reserved for communication between unsynchronised nodes (N1, N2). At least one such reserved carrier is assigned to each base station. A sinusoidal signal is transmitted on this reserved carrier during a time period at least equal to two consecutive OFDM symbol time periods. The unsynchronised receiver detects the sinusoidal signal during one of two consecutive OFDM symbol time periods. The existence, the frequency and the signal power of the signal give information about the existence and Identity of the transmitter. Also, estimates of relative velocities and distances can be deduced. In preferred embodiments, the sinusoidal signal can also be used to transmit further information by using signal modulation or coding that is independent of the absolute signal phase.

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